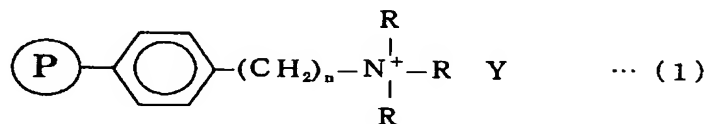


## CLAIMS

1. A method for producing a radioactive fluorine compound comprising the steps of: introducing [ $^{18}\text{F}$ ] fluoride ion-containing [ $^{18}\text{O}$ ] water into a column packed with an ion exchange resin to collect [ $^{18}\text{F}$ ] fluoride ions; and causing a substrate to react with the collected [ $^{18}\text{F}$ ] fluoride ions, characterized in that the ion exchange resin is represented by the following general formula (1):



wherein n represents an integer from 1 to 10; R represents a linear or branched monovalent hydrocarbon group having 1 to 8 carbon atoms; P represents a styrene copolymer; and Y represents an anion.

2. The method for producing a radioactive fluorine compound according to Claim 1, wherein, in the ion exchange resin of the general formula (1), n is 1, R is a linear butyl group, Y is  $\text{CO}_3^{2-}$  or  $\text{HCO}_3^-$  and P is a polystyrene-divinylbenzene copolymer.

3. The method for producing a radioactive fluorine compound according to Claim 1, wherein the [ $^{18}\text{F}$ ] fluoride ion-containing [ $^{18}\text{O}$ ] water is introduced into the column in an amount of 1 g to 20 g.